Connecting the dots: phonologization of redundant tenseness across Welsh dialects

Phonologization of redundant tenseness across Welsh dialects

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Argument

I propose a reconstruction of the following phonological processes in Welsh

- North Welsh shows a familiar connection between vowel length and tenseness: [eː oː ɛ ɔ], /eː oː e o/
- South-West Welsh phonologizes tenseness due to a historical height dissimilation which creates [ɛː ɔː]: /eː oː ɛː ɔː ɛ ɔ/
- South(-East) Welsh identifies [tense] with [spread glottis] found in consonants, due to phonological interactions between [eː oː] and stops

North Welsh

Example: Dyffryn Alyn, Flintshire (A. R. Thomas 1966)

- Long vowels only found under stress, but not all stressed vowels are long
- In particular, stressed vowels are long before [b̥ d̥ g̊], short before [pʰ tʰ kʰ]
- All stressed vowels are short before clusters
- (Single) consonants are long after short stressed vowels
- Long vowels are tense, short vowels are lax

(1) a. ['heːn] 'old' ≠ ['pʰɛn] 'head'
b. ['tʰoːn] 'tune' ≠ ['tʰɔn] 'wave'

- Variation in unstressed position (unsurprising: no contrast)
- Disagreement in literature on whether tense or length is "phonemic" (A. R. Thomas 1966, G. E. Jones 1984, Awbery 1986)
- Length definitely active in phonology, quality inert in alternations

☞ Only quantity is phonologically relevant, tenseness could be (non-automatic) phonetic implementation: /eː oː e o/

- But the consistency of the tenseness/length pairing is a potential cue for speakers to phonologize (seemingly redundant) tenseness

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South-West Welsh

In SW Welsh (Awbery 1986, C. Jones & Thorne 1992) *long* mid vowels can be tense or lax: tense before [−high] vowels, lax before [+high] vowels:

(4) a. ['kʰɔːd̥i] 'to rise' ≠ ['kʰoːd̥ɔð] '((s)he) rose'
b. ['g̊wɛːd̥ʊχ] '(you (pl.)) say' ≠ ['g̊weːd̥ɔð] '((s)he) said'

Preliminary analysis indicates that the alternation is unlikely to be (only) phonetic implementation

- [eː oː] cannot just result from undershoot: this is the realization in monosyllables
- [ɛː ɔː] in penults seem to be targets

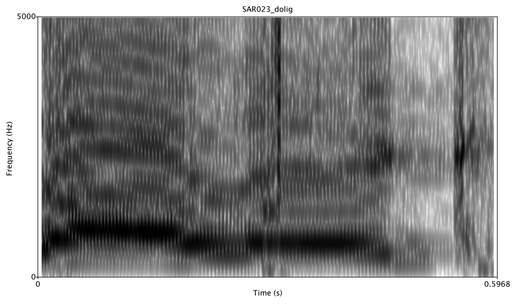

Figure 1: Spectrogram of ['d̥ɔːlɪg̊] 'Christmas', SW Wales speaker. Note steady formants in [ɔː]

- Alternation is categorical and sensitive to *phonology* ([±high] specification)

☞ Phonological inventory: at least /eː oː ɛː ɔː ɛ ɔ/

South-East Welsh

Caledïad ("provection") (Greene 1967): "devoicing" of stops after a stressed vowel

(2) Nantgarw (C. H. Thomas 1993), transcription as in source
a. [gwrɛ'gəsa] 'belts' ∼ ['gwrekɪʃ] 'belt'
b. ['kənɪg] 'offer' ∼ [kə'nɪkjon] 'offers'

However, *caledïad* does not neutralize laryngeal contrast

- Underlying fortis stops yield [VT:V]: [tʊkːo] 'tuck'
- Provected stops yield [V:TV]: [keːkɪn] 'kitchen'
- Fortis stops are aspirated, provected stops are not (S. E. Thomas 1983)

Suggestion: unaspirated fortis (provected) stops result from double link of [SG], as with [st] clusters (e. g. Iverson & Salmons 1995)
Substance-free alert: [tense] identified with [SG], probably because [SG] was already available (Kiparsky 1995)
Stress favours spreading of [tense] from vowels

(3) gwrekɪʃ
[tense]

Underlying fortis stops are unaffected because vowels are short (→ non-tense) before them

☞ Length apparently ceases to play the central role once [tense] is so strongly integrated in phonology

☞ Account required for provection after lax vowels as in *cynigion*: probably new syllabic/moraic structure

Reconstruction

Provection is a possible counterexample to the generalization that "tense"/[ATR] in vowels correlates with voicing in consonants (e. g. Vaux 1996)

- I suggest that provection is a phonological change, not a phonologization of some phonetic change

☞ No recorded dialect with regular provection, always lexically specific and socially constrained

If [tense] is phonological, its distribution is restricted

- [ɛ ɔ] are found before all consonants
  - From */e o/ in closed syllables
  - From */eː oː/ in open syllables
- [e o] are only found in long contexts, which for stops means
  - Before [b̥ d̥ g̊]
  - Not before [pʰ tʰ kʰ]
- In other words, the phonology allowed [ed̥ ɛd̥ ɛtʰ] but not *[etʰ]
- *Caledïad* fills the gap by identifying [tense] with [SG] and creating doubly linked structures as in ['g̊wrekɪʃ]
- The lack of aspiration follows from the rules of phonetic interpretation in the language, as attested in [st ɬt]-type clusters
- SE Wales does not have the [eː oː] ∼ [ɛː ɔː] alternations of SW dialects: presumably the phonologization of tenseness was independent of the SW pattern

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Conclusions

☞ Categorical distribution of tenseness and length (as in North Wales) leads to the treatment of tenseness as a phonological feature

☞ Phonological change leads to further involvement of tenseness in the phonological computation

☞ The phonological conceptualization of this feature depends on what other features it interacts with

- Aperture in SW Wales
- Laryngeal features in SE Wales

☞ This account of change supports the claim that features are emergent/substance-free and are based on phonological activity